

CalESCO

CALIFORNIA EARTH SCIENCE CORPORATION

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August 5, 1973

CONTRACT NAS 2-7698
MONTHLY PROGRESS REPORT NO. 2
JULY 1973

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Fault Tectonics and Earthquake Hazards in the Peninsular
Ranges, Southern California, EREP Investigation 463

NASA, Ames Research Center
Mail Code 241-1
Moffett Field, CA 94035

Attention: Mr. Alvin S. Hertzog
Procurement Officer

Gentlemen:

California Earth Science Corporation (CalESCO) is pleased to submit its 2nd
Monthly Progress Report on the application of Skylab imagery to analysis of
fault tectonics and earthquake hazards in the Peninsular Ranges, southern
California under NASA contract No. NAS 2-7698.

Summary Outlook

The principal plans for the immediate future are to accomplish preliminary
analysis of images from SL-1/SL-2. The summary outlook provides a time-
oriented schedule of the entire effort to be performed.

Significant Progress

The test site was photographed by the 190A camera aboard Skylab No. 1 on June
2, 1973. At the time of writing, this imagery has not been received from NASA.

The milestone plan required under the Statement of Work has been prepared and
was submitted on July 16, 1973.

The following supporting studies of the test site have been accomplished or are
continuing:

1. The published literature, geologic maps and reports pertaining to the fault
tectonics, record of earthquakes, and geologic data on the history and mag-
nitude of fault slip are being reviewed. These data will provide the back-
ground for a comparison of the appearance of different faults and tectonic

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EARTHQUAKE HAZARDS IN THE PENINSULAR
RANGES, SOUTHERN CALIFORNIA Monthly
Progress (California Earth Science Corp.,
Santa Monica.) 3 p HC \$3.00 CSCL 08G

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features on the Skylab imagery.

2. A map of southern California is being prepared showing all recently active faults, traces of ground rupture, amounts of displacement and other information pertinent to the interpretation of SL imagery.
3. Aircraft and ERTS photographs of the test site are being identified, and obtained.
4. Copies of the California Division of Mines and Geology 1/250,000 and 1/750,000 scale geologic maps suitable for the preparation of mylar transparent overlays have been obtained.
5. On July 11, 1973, a meeting was held with representatives of Kern County government. Attending the meeting were Mr. Brad Williams, county planner, Mr. Jackson, Office of Emergency Preparedness, Dr. Rene Engle, consultant to Kern County, and D. L. Lamar and P. M. Merifield of CalESCO. Kern County is preparing 7½ and 15 minute geologic hazards maps for urban planning purposes. Areas of potential earthquake hazards, landslides, high ground water levels and expansive soils will be delineated. Data will come largely from aerial photos. CalESCO personnel provided information regarding the availability of satellite and aircraft coverage and other geologic information applicable to the completion of this task.

Expected Accomplishments, Current Month

1. Photographs of the test site will be received and a preliminary analysis will be initiated.
2. The supporting studies will be continued.
3. Image enhancement of the Skylab photographs under subcontract to the Rand Corporation will be initiated.

Travel Summary and Plans

No travel in connection with the subject investigation was accomplished outside of the immediate area during July, and none is planned during August.

August 5, 1973

Very truly yours,

CALIFORNIA EARTH SCIENCE CORPORATION



Paul M. Merifield, Ph.D.
Principal Investigator

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